SANTA CRUZ BIOTECHNOLOGY, INC.

Gemin2 (H-100): sc-50404

BACKGROUND

Spinal muscular atrophy (SMA) is an autosomal recessive neurodegenerative disease characterized by loss of motor neurons in the spinal cord. SMA is caused by deletion or loss-of-function mutations in the SMN (survival of motor neuron) gene. Gemin2 (formerly known as SIP1 for SMN interacting protein) associates directly with SMN and is a part of the SMN complex containing Gemin3 (a DEAD-box RNA helicase), Gemin4, Gemin5 and Gemin6, as well as several spliceosomal snRNP proteins. The SMN complex plays an essential role in splicesomal snRNP assembly in the cytoplasm and is required for pre-mRNA splicing of the nucleus. It is found in both the cytoplasm and the nucleus. The nuclear form is concentrated in subnuclear bodies called gems (Gemini of the coiled bodies). The SMN-Gemin2 complex is associated with spliceosomal snRNAs U1 and U5. Gemin2 is expressed in spinal cord. It can be induced by TGFβ treatment and expression is high in several E-cadherin negative human carcinoma cell lines. SMN is expressed in a wide variety of tissues including brain, kidney, liver and spinal cord, and moderately in skeletal and cardiac muscle.

CHROMOSOMAL LOCATION

Genetic locus: SIP1 (human) mapping to 14q21.1; Sip1 (mouse) mapping to 12 C1.

SOURCE

Gemin2 (H-100) is a rabbit polyclonal antibody raised against amino acids 2-101 mapping at the N-terminus of Gemin2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Gemin2 (H-100) is recommended for detection of Gemin2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Gemin2 (H-100) is also recommended for detection of Gemin2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Gemin2 siRNA (h): sc-42129, Gemin2 siRNA (m): sc-42130, Gemin2 shRNA Plasmid (h): sc-42129-SH, Gemin2 shRNA Plasmid (m): sc-42130-SH, Gemin2 shRNA (h) Lentiviral Particles: sc-42129-V and Gemin2 shRNA (m) Lentiviral Particles: sc-42130-V.

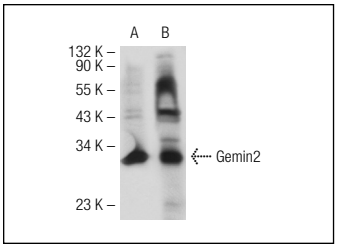
Molecular Weight of Gemin2: 32-34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Gemin2 (H-100): sc-50404. Western blot analysis of Gemin2 expression in 293T (**A**) and HeLa (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hsu, Y.Y., et al. 2012. Triptolide increases SMN transcript and protein levels in human SMA fibroblasts and improves survival in SMA-like mice. Br. J. Pharmacol. 166: 1114-1126.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.